



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,107	12/10/2001	Britt Yenne	5760-00901	2646

7590 10/04/2004

ATTEN: NOEL KIVLIN  
MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.  
P.O. BOX 398  
AUSTIN, TX 78767-0398

EXAMINER

NGUYEN BA, HOANG VU A

ART UNIT	PAPER NUMBER
----------	--------------

2122

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/014,107

Applicant(s)

YENNE ET AL.

Examiner

Hoang-Vu A Nguyen-Ba

Art Unit

2122

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892) \*
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 07/08/02.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This action is responsive to the application filed December 10, 2001.
2. Claims 1-30 have been examined.

#### *Priority*

3. The Office acknowledges the claim for priority. The priority date considered for this application is December 21, 2000.

#### *Information Disclosure Statement*

4. The Office acknowledges receipt of the Information Disclosure Statement filed July 8, 2002. It has been placed in the application file and the information referred to therein has been considered.

#### *Oath/Declaration*

5. The Office acknowledges receipt of a properly signed oath/declaration filed May 28, 2002.

#### *Notice of Change of Address*

6. The Office acknowledges receipt of the notice of change of address filed June 9, 2003.

#### *Drawings*

7. The drawings, filed May 28, 2002 is accepted by the examiner.

*Specification*

8. The specification is objected to because of the following minor informalities:  
the Abstract of the disclosure contains more than 150 words.

Appropriate correction is required.

*Claim Objection*

9. Claims 17, 19, 25, 29 and 30 are objected to because of the following informalities:
- a. Claim 17: the period at the end of line 5 should be replaced with a comma;
  - b. Claim 19: a blank space should be inserted between “channel” and “dictates”;
  - c. Claim 25: claim 25 contains improper claim dependency; for compact prosecution purposes, the Office considers claim 25 to depend from independent claim 22;
  - d. Claim 29: claim 29 contains improper claim dependency; for compact prosecution purposes, the Office considers claim 29 to depend from claim 28;
  - e. Claim 30: claim 30 contains improper claim dependency; for compact prosecution purposes, the Office considers claim 30 to depend from claim 29.

Appropriate correction is required.

*Claim Rejections - 35 USC § 112*

10. The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 20, 27 and 28 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 20 recites the limitation “the shared memory is concurrently connected and accessible to a plurality of runtime instances of execution of the program.” While it is understandable that a shared memory is accessible by concurrent processes, it is unclear how a shared memory can be connected to concurrent processes. Memory is an object while process is a series of operations leading to an end. These entities do not appear to be connectable.

Since claims 27 and 28 contain the same claim language discrepancy, the same rejection is thus applied.

### *Claim Rejections – 35 U.S.C. § 102*

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent,

except that an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language;

13. Claims 1-30 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,164,841 to Mattson, Jr. et al..

**Claim 1**

Mattson discloses at least:

*a code expander for detecting the at least one function call of the program (see at least Figure 3, items 103, 310, 312, 326, and related discussion in the specification);*  
*at least one trace point (see at least Figure 3, items 314, 316, 328, 330 and related discussion in the specification); and*  
*an inserter, communicably connected with the code expander and the at least one trace point, for inserting the at least one trace point in the program relative to the at least one function call (see at least Figure 3, items 314, 316, 328, 330 and related discussion in the specification).*

**Claim 4**

Since claim 4 recites a method that is similar to the one performed by the pre-processor of claim 1, the same rejection is applied.

**Claim 7**

Claim 7 recites a run-time tracer comprising similar features of claim 1. The database and trace id features of claim 7 are deemed inherent to the pre-processor of claim 1. Without these two features, the trace point of claim 1 could not be inserted into the program relative to the function call. As a result, the rejection of claim 1 is also applicable to claim 7.

**Claim 17**

Claim 17 recites a shared memory comprising an executable program that performs the same functions of the pre-processor program recited in claims 1 and 7. The feature "address" recited in claim 7 is deemed inherent to the pre-processor

recited in claim 1. Without the specification of an address, the shared memory would be inaccessible for operation.

#### **Claim 22**

Since claim 22 recites similar features of claims 1 and 7, the same rejections are also applicable to claim 22.

#### **Claim 27**

Since claim 27 recites a method that is similar to that performed by the executable program stored in the shared memory recited in claim 17, the same rejection is thus applied.

#### **Claims 2, 6 and 26**

Rejections of base claims 1, 4 and 22 are incorporated respectively. Mattson further discloses *wherein the at least one trace point invokes detection of a characteristic regarding the at least one function call, during runtime execution of the program* (see at least Figure 3, items 314, 316, 326, 328, 330 and related discussion in the specification).

#### **Claims 3 and 19**

Rejections of base claims 1 and 17 are incorporated respectively. Mattson further discloses:

*a function routine having a characteristic, operable upon execution of the program and encountering the at least one function call ; wherein the relativeness of the insertion of the at least one trace point with respect to the at least one function call is dictated, at least in part, by the characteristic of the function routine* (see at least Figure 3, items 314, 316, 326, 328, 330 and related discussion in the specification).

### **Claim 5**

The rejection of base claim 4 is incorporated. Mattson further discloses *wherein the step of associating includes: inserting the at least one trace point in the program relative to the at least one function call* (see at least Figure 3, items 314, 316, 326, 328, 330 and related discussion in the specification).

### **Claims 8 and 23**

Rejections of base claims 7 and 22 are incorporated. Mattson further discloses *wherein the software program is object code readable by the data processor* (see at least Figure 1, item 108 and related discussion in the specification).

### **Claim 9**

The rejection of base claim 7 and intervening claim 8 is incorporated. Mattson further discloses:

*a trace information dictated by occurrences at the at least one function call during execution of the program* (see at least Figure 6, item 314 and related discussion in the specification); and

*a shared memory for maintaining the trace information* (see at least Figure 6, items 304, 306 and related discussion in the specification).

### **Claims 10 and 24**

Rejections of base claims 7 and 22 as well as of intervening claims 8-9 and 23 respectively are incorporated. Mattson further discloses *wherein the database includes at least one trace id and relates the trace id with the at least one trace point* (see at least Figure 3, item 314 and related discussion in the specification).



### **Claim 11**

The rejection of base claim 7 and intervening claims 8-10 are incorporated. Mattson further discloses *wherein the database maintains a human readable information that corresponds to the trace information and the at least one trace id and relates the trace information and the at least one trace id to a portion of the human readable information indicative of occurrences associated with the trace information during execution* (see at least Figure 3, items 326, 328, 330 and related discussion in the specification).

### **Claim 12**

Rejections of base claim 7 and intervening claims 8-10 are incorporated. Mattson further discloses *wherein the shared memory is written to by and during multiple executions of the program* (see at least Figure 3, items 306, 308; Figure 5, item 308; Figure 6, item 306; Figure 7, item 308; and related discussion in the specification).

### **Claim 14**

Since claim 14 recites a similar feature of claim 11, the rejection of 11 is also applicable to claim 14.

### **Claim 15**

The rejection of base claim 7 is incorporated. does not specifically disclose:

- a function routine accessible to the data processor, corresponding to and called by the at least one function call;*
- a characteristic of the function routine, wherein the characteristic is detectable via the data processor on execution of the function routine;*
- a trace channel accessible to the data processor; and*

*an identifier of the characteristic that is saved to the trace channel via operation of the data processor, upon detection of the characteristic.* However, these features are deemed to be inherent to the teaching of Mattson. Without these features the tracing process would not be operative.

#### **Claim 16**

Rejections of base claim 7 and intervening claim 15 are incorporated. Mattson does not specifically disclose *wherein the trace channel is a circular buffer written to by copy direct from the data processor.* However, this circular buffer is deemed inherent to the teaching of Mattson. Without a circular buffer, the tracing process would not be operative.

#### **Claims 18, 28 and 29**

The rejection of base claims 7 and 27 are incorporated. Mattson further discloses *wherein the shared memory is selectively configured during execution of the executable program to capture select ones of the trace points, in order to permit tracing via the run-time tracing of only select ones of the trace points* (see at least Figure 3, items 306, 308; Figure 5, item 308; Figure 6, item 306; Figure 7, item 308; and related discussion in the specification).

#### **Claims 20, 25 and 30**

Rejections of base claims 17, 22 and 27 are incorporated. Mattson further discloses *wherein the shared memory is a concurrently connected and accessible to a plurality of run-time instances of execution of the program* (see at least Figure 3, items 306, 308; Figure 5, item 308; Figure 6, item 306; Figure 7, item 308 and related discussion in the specification).

### **Claim 21**

Rejections of base claim 17 and intervening claim 20 are incorporated. Mattson further discloses *wherein the shared memory contains trace information related to trace points encountered in a most current run-time instance of execution of the program, as well as past instances* (see at least Figure 3, items 304, 306, 308, 314, 316, 328, 330 and related discussion in the specification).

### **Conclusion**

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang-Vu "Antony" Nguyen-Ba whose telephone number is (703) 305-0103. The examiner can normally be reached on Tuesday-Friday, 6:00 to 16:15.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam can be reached on (703) 305-4552. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

After October 25, the Examiner can be reached at (571) 272-3701 and the Examiner's supervisor at (571) 272-3695.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Application/Control Number: 10/014,107  
Art Unit: 2122

Page 11

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, reading "Hoangon Antony Nguyen Ba". The signature is written in a cursive, flowing style with a long horizontal line extending from the end.

**ANTONY NGUYEN-BA**  
**PRIMARY EXAMINER**

Art Unit 2122

September 28, 2004